

What is claimed is:

- 5 1. A method of patterning metal layers of a semiconductor wafer, the method comprising:  
depositing a first conductive layer over a substrate;  
depositing an insulating layer over the first conductive layer;  
depositing a second conductive layer over the  
10 insulating layer;  
depositing a first resist over the second conductive layer;  
depositing a second resist over the first resist;  
patterning the first resist with a first pattern and  
15 patterning the second resist with a second pattern; and  
simultaneously transferring the first pattern to the first conductive layer and the second pattern to the second conductive layer.
- 20 2. The method according to Claim 1 wherein transferring the first and second patterns comprise exposing the wafer to a single reactive ion etch process.
- 25 3. The method according to Claim 1 wherein the first resist comprises a negative resist and the second resist comprises a positive resist.
- 30 4. The method according to Claim 1 wherein the first resist comprises a positive resist and the second resist comprises a negative resist.

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5. The method according to Claim 1 wherein the insulating layer comprises a capacitor dielectric, wherein transferring the first pattern to the first conductive layer comprises forming bottom metal plates of a MIM capacitor, and wherein transferring the second pattern to the second conductive layer comprises forming top metal plates of the MIM capacitor.

6. The method according to Claim 1 further comprising  
10 transferring the first pattern to the insulating layer.

7. A method of patterning metal layers of a semiconductor wafer, the wafer comprising a first conductive layer, an insulating layer disposed over the first conductive layer and a second conductive layer disposed over the insulating layer, the method comprising:

depositing a first resist over the second conductive layer;  
20 patterning the first resist with a first pattern;  
depositing a second resist over the first resist;  
patterning the second resist with a second pattern;  
simultaneously transferring the first pattern to the first conductive layer and transferring the second  
25 pattern to the second conductive layer.

8. The method according to Claim 7 wherein transferring the first and second patterns comprise exposing the wafer to a reactive ion etch process.

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9. The method according to Claim 8 wherein the first resist comprises a negative resist and the second resist comprises a positive resist.

10. The method according to Claim 8 wherein the first resist comprises a positive resist and the second resist comprises a negative resist.

5 11. The method according to Claim 8 wherein the insulating layer comprises a capacitor dielectric, wherein transferring the first pattern to the first conductive layer comprises forming bottom metal plates of a MIM capacitor, and wherein transferring the second  
10 pattern to the second conductive layer comprises forming top metal plates of the MIM capacitor.

12. The method according to Claim 7 further comprising transferring the first pattern to the insulating layer.

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13. A method of forming capacitive plates of a MIM capacitor, comprising:

providing a wafer having a substrate;

depositing a first conductive layer on the

20 substrate;

depositing a capacitor dielectric layer over the first conductive layer;

depositing a second conductive layer over the capacitor dielectric layer;

25 depositing a first resist over the second conductive layer;

patterning the first resist with a first pattern;

depositing a second resist over the first resist;

patterning the second resist with a second pattern;

30 simultaneously transferring the first pattern to the first conductive layer and transferring the second pattern to the second conductive layer.

14. The method according to Claim 13 wherein transferring the first and second patterns comprise exposing the wafer to a reactive ion etch process.

5 15. The method according to Claim 13 wherein the first resist comprises a negative resist and the second resist comprises a positive resist.

16. The method according to Claim 13 wherein the first  
10 resist comprises a positive resist and the second resist  
comprises a negative resist.

17. The method according to Claim 13 further comprising transferring the first pattern to the insulating layer.

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[illegible]